

ABSTRACT OF THE DISCLOSURE

An object of the present invention is to provide a charged-device model (CDM) electrostatic discharge (ESD) protection circuit for an integrated circuit (IC). The ESD protection circuit comprises an ESD clamp device and a functional component. The ESD clamp device is coupled to a pad and a substrate having a first conductivity type. Under normal power operation, the ESD clamp device is closed. The functional component is formed on the substrate and coupled to the pad. The functional component has a first well having the first conductivity type and an isolating region having a second conductivity type for isolating the first well from the substrate. Under normal power operation, the functional component transmits signals between the IC and an external linkage. During an CDM ESD event, the CDM charges accumulated in the substrate are discharged via the ESD clamp circuit. Hence, the functional component is protected.